

1.	Record Nr.	UNINA990000085810403321
	Autore	Tonelli, Luigi
	Titolo	Meccanica tessile : dalla preparazione della tessitura alla finitura dei tessuti / Luigi Tonelli
	Pubbl/distr/stampa	Milano : U. Hoepli, 1912
	Descrizione fisica	X, 510 p. : ill. ; 23 cm
	Disciplina	677.028 5
	Locazione	FINBC
	Collocazione	13 L 22 18
	Lingua di pubblicazione	Italiano
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
2.	Record Nr.	UNINA9910822478803321
	Autore	Fong C. Y (Ching-yao)
	Titolo	Half-metallic materials and their properties / / C.Y. Fong, University of California, Davis, USA, J.E. Pask, Lawrence Livermore National Laboratory, USA, L.H. Yang, Lawrence Livermore National Laboratory, USA
	Pubbl/distr/stampa	London, UK, : Imperial College Press Singapore, : Dist. by World Scientific, 2013 London : , : Imperial College Press, , [2013] 2013
	ISBN	1-299-46215-4 1-908977-13-2
	Descrizione fisica	1 online resource (xii, 291 pages) : illustrations
	Collana	Materials for engineering ; ; v. 2
	Disciplina	620 620.16
	Soggetti	Metallic composites
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia

Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Acknowledgments; Preface; Contents; 1. Introduction; 1.1 Background; 1.2 Classes of Half-metals; 1.3 Half-metallic Devices; 2. Methods of Studying Half-metals; 2.1 Introduction; 2.2 Molecular Beam Epitaxy (MBE); 2.2.1. Schematic setup; 2.2.2. Issues concerning growth; 2.2.2.1. Substrate for Heusler alloys; 2.2.2.2. Substrate for HMs with ZB structure; 2.2.2.3. Temperature; 2.3 Characterization of Samples; 2.3.1. Reflection high-energy electron diffraction (RHEED); 2.3.1.1. Basic information; 2.3.1.2. What is measured; 2.3.2. X-ray reflectometry (XRR); 2.3.2.1. Basic information; 2.3.2.2. Schematic setup; 2.3.2.3. What is measured; 2.3.3. Scanning tunneling microscopy (STM); 2.3.3.1. Basic information; 2.3.3.2. What is measured; 2.3.4. Auger electron spectroscopy (AES); 2.3.4.1. Basic processes; 2.3.4.2. Simplified experimental setup; 2.3.4.3. What is measured; 2.3.4.4. Remarks; 2.4 Methods of Determining Physical Properties; 2.4.1. Magnetic properties; 2.4.1.1. SQUID-based magnetometer; 2.4.1.2. Magneto-optical Kerr effect (MOKE); 2.4.1.3. X-ray magnetic circular dichroism (XMCD); 2.4.2. Transport properties; 2.4.2.1. Magnetic tunnel junctions (MTJs); 2.4.2.2. Resistivity; 2.4.2.3. Hall conductivity; 2.4.3. Half-metallic properties; 2.4.3.1. Spin-polarized angle-resolved photoemission spectroscopy (ARPES); 2.4.3.2. Ferromagnet-superconductor tunneling; 2.4.3.3. Andreev reflection; 2.4.3.4. Curie temperature TC; 2.5 Theoretical Methods; 2.5.1. Density functional theory (DFT); 2.5.1.1. Hohenberg-Kohn theorem I; 2.5.1.2. Hohenberg-Kohn theorem II; 2.5.2. Kohn-Sham equations; 2.5.2.1. Local density approximation (LDA); 2.5.2.2. Spin-polarized Kohn-Sham equations; 2.5.2.3. Generalized gradient approximation (GGA); 2.5.3. Methods of calculating electronic properties; 2.5.3.1. Linearized augmented plane wave (LAPW) method; 2.5.3.2. Korringa-Kohn-Rostoker (KKR) method; 2.5.3.3. Pseudopotential method; 2.5.3.4. LDA+U; 2.5.4. Methods of calculating Curie temperature TC; 2.5.4.1. Determination of the dominant excitation; 2.5.4.2. Basic idea; 2.5.4.3. Comments on practical calculations; 3. Heusler Alloys; 3.1 Introduction; 3.2 Half-Heusler and Full-Heusler Alloys; 3.3 Methods of Growing Heusler Alloys; 3.3.1. Bulk Heusler alloys; 3.3.1.1. Arc-melting method; 3.3.1.2. Tri-arc Czochralski method; 3.3.2. Thin films; 3.3.2.1. MBE method; 3.3.2.2. Radio frequency magnetron sputtering method; 3.3.2.3. Pulsed laser deposition (PLD); 3.4 Characterization of Heusler Alloys; 3.4.1. Bulk Heusler alloys; 3.4.2. Thin films; 3.4.2.1. Auger electron spectroscopy (AES); 3.4.2.2. Low-energy electron diffraction (LEED); 3.5 Physical Properties of Bulk Heusler Alloys; 3.5.1. Magnetic moments and the Slater-Pauling rule; 3.5.2. Insulating gap in half-metallic Heusler alloys; 3.5.2.1. Half-Heusler alloys; 3.5.2.2. Full-Heusler alloys; 3.5.3. Polarization at EF; 3.5.4. Magnetic moments; 3.5.5. Curie temperature TC
Sommario/riassunto	This volume provides a detailed treatment of half-metallic materials and their properties from both an experimental and theoretical point of view. It discusses the methods used to understand and predict the properties of half-metals and the gamut of other materials amenable to these techniques. It also offers an expansive bibliography to facilitate further and deeper research. This book provides the precise definitions of all key terminology used in the vast and varied literature. This is the first comprehensive monograph on the subject and will serve as a starting point for graduate students a

